



BIM4EEB

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Problem statement

The Building Information Modelling (BIM) tools developed so far are targeting mainly new buildings (all types). In order to offer easy, practical, operational tools for all stakeholders, including constructing companies, designers, architects and service companies, we need to deploy attractive tool kits also for existing buildings.

Project Objectives

- To harmonise and provide common data exchange formats regarding the components and equipment of a building
- The modelling of the building energy should include existing parameters, as well as the environmental and GIS data.
- Be flexible in coupling the overall BIM system with other additional types of models
- Be flexible to adapt to work planning, as-buildings documentation and procedures to process changes.
- Allow the development of applications to benefit from inputs of inhabitants.
- A close cooperation with standardisation bodies is required in order to validate the new BIM tools.

Outcomes

- Tools for efficient geometrical and semantic data collection of existing buildings
- Model fine tuning and checking functions with AR interfaces;
- Tools relevant to the optimisation of HVAC operation and efficiency management;
- Integration of external data sources and tools
- Integration of behavioural factors and human centric information within energy modelling modules;
- Retrofit scenario generator with specific expertise on HVAC systems;
- Creation of a Collaborative platform according to the renovation workflow with a common data environment

Impacts of research:

A reduction of the renovation working time of at least 15 -20 % compared to current practices with the baseline defined in the proposal.

- Acceleration of the market uptake by speeding-up industrial exploitation, in particular amongst constructing/ renovations companies with a target of 50% of their renovation business based on BIM.
- Creation of best practice examples for the construction retrofitting sector with benefits for the operators and associated stakeholders (architects, designers, planners, etc.)